N311 Care Plan #2

Lakeview College of Nursing

Katie Finn

Demographics (5 points)

Date of Admission 10/11/2021	Patient Initials TLB	Age 58	Gender Female
Race/Ethnicity Caucasian	Occupation Real Estate Broker	Marital Status Married	Allergies Codeine and Phenergan
Code Status Full code	Height 170.2 cm	Weight 77.7 kg	

Medical History (5 Points)

Past Medical History: Liver cyst (date not reported), arthritis (date not reported), adrenal mass (9/27/2019), irritable bowel syndrome (date not reported), and vaginal childbirth (1987). Allergic to codeine and Phenergan. Codeine is a mild allergy that causes an upset stomach, and Phenergan causes syncope in patient.

Past Surgical History: Permanent bridge of front, top four teeth (date not reported), cholecystectomy (1994), hysterectomy (1991-1994), appendectomy (1991), spinal reconstruction of C5-C7 vertebra and laminectomy (2007), two shoulder surgeries (2010, 2012), adhesions in abdomen (2013), bladder reconstruction (2014), and right hallux valgus repair (12/11/2020).

Family History: Mother – hypertension and diabetes mellitus type II. Brother – diabetes mellitus type II. Fraternal and maternal grandparents – hypertension.

Social History (tobacco/alcohol/drugs): Patient denies alcohol use. Reports smoking one pack a day of cigarettes since she was 16 years old and currently smokes about 10 or more cigarettes (half pack or more) a day. Patient lives with husband in a house.

Admission Assessment

Chief Complaint (2 points): Pain in all four quadrants of abdomen

History of present Illness (10 points): On September 30, 2021, a 58-year-old woman started to experience sharp, lower abdominal pain. Patient originally thought the pain was from a kidney stone and tried drinking more water and cranberry juice to help alleviate symptoms. Pain did not go away so patient decided to come to Sarah Bush Lincoln Hospital (10/02/2020), and they ordered a computerized tomography (CT) scan without contrast. The imaging procedure showed a thickened bowel wall and patient was diagnosed with diverticulitis. The patient was then prescribed 8 pills, 75 mg each of Augmentin (generic: amoxicillin and clavulanate) and was sent home. Patient came back on the 11th of October 2021 because there was no change in her condition. She was now experiencing very painful stomach cramping and painful bowel movements, but no diarrhea was reported. The hospital ordered a CT scan with contrast on 10/11/2021 and found an abscess in the sigmoid colon measuring 2.9 x 2.7 cm. Patient was then admitted into the hospital that day.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Diverticulitis

Secondary Diagnosis (if applicable): Intra-abdominal abscess in the sigmoid colon

Pathophysiology of the Disease, APA format (20 points): Diverticulitis is a disorder associated with diverticular disease. It starts as diverticulosis where “the bowel wall has multiple weakened areas that form small outpouchings called diverticula”. These diverticula are usually found in the sigmoid and descending colon. Once the diverticula are inflamed, it is considered diverticulitis (Capriotti, pp. 746).

Most people (80%-85%) are asymptomatic with diverticula, but the risk increases with age. The risk of having diverticula before 40 years old is lower than 5% and increases to more than 65% by the age of 85 years old; the mean age being 60. About 15%-20% of those with

diverticula develop diverticulitis, and 15%-25% of those patients can need surgery from complications. Those complication include intestinal rupture, peritonitis, abscess formation, and fistula formation. Patients that decide not to have surgery for those complications have a recurrence rate of 20%-35%. The largest risk for diverticular formation is low dietary fiber (Capriotti, pp. 746).

Diverticulitis starts with a weakened bowel wall and increased pressure to the lumen. These weakened bowel muscles can happen where the branches of blood vessels enter the colonic wall. This leads to protrusions in the bowel when there's increased intra-abdominal pressure. The diverticula will form in these protrusions and contents in the intestine will get caught in those pockets. The contents will create a block, and this cuts off the blood supply and gives a good environment for infection. Diverticulitis then forms once those areas are inflamed and infected (Capriotti, pp. 746).

To be able to diagnose diverticulitis, there are a few tests to choose from. The most recommended is a computed tomography (CT) scan with or without contrast. Colonoscopy can help visualize where the diverticula is inside the colon, but it should not be done during acute diverticulitis. Abdominal x-ray, ultrasound, and MRI are also options to help diagnosis this condition. A pelvic examination should be done on patients with a uterus to reject gynecological sources of pain, and if pregnancy is a possibility, then a pregnancy test must be done. A stool analysis can be done if the patient has diarrhea. Finally, a complete blood count with differential should be done, along with serum electrolytes, serum amylase, and lipase to "exclude perforation of viscera, liver enzymes, and bilirubin" (Capriotti, pp. 746).

To treat uncomplicated diverticulitis, patients are given 7-10 days of antibiotic therapy, pain medications, and resting the bowel with a liquid diet and gradually reintroducing a soft diet.

15% of patients with diverticulitis can develop complications that were mentioned before. If the patient experiences recurrent cases of acute diverticulitis can cause progressive fibrosis and scarring which leads to a stricture in that part of the bowel. Patients with sepsis, advanced age, immunosuppression, or peritonitis require inpatient treatment. Inpatient treatment incorporates IV antibiotics, fluids, and analgesics. Those who fail to improve from that will go into surgery to remove the diseased area of the colon and will create an end colostomy and a rectal stump. This colostomy will be reversed 3 months later (Capriotti, pp. 746).

My patient was diagnosed with diverticulitis via CT scan without contrast and later found an abscess with a CT scan with contrast. She is at a higher risk of diverticulitis because of her history with IBS and age (58 years old). My patient should be educated on incorporating high fiber foods in her diet to prevent diverticulitis in the future, but for now should eat a liquid diet only until the infection and inflammation goes away.

Capriotti, T. M. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed.). F. A. Davis Company. https://fadavisreader.vitalsource.com/books/9781719641470

Laboratory Data (20 points)

If laboratory data is unavailable, values will be assigned by the clinical instructor

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value (10/11)	Today's Value (10/12)	Reason for Abnormal Value
RBC ($x10^6$/µL)	3.90-4.98	4.48	4.08	N/A
Hgb (g/dL)	12.0-15.5	12.6	11.6	N/A
Hct (%)	35.0-45.0	36.9	34.3	N/A
Platelets (K/µL)	140-400	346	286	N/A

WBC (K/μL)	4.0-9.0	13.2	8.3	Increased WBCs due to increase neutrophils because of acute infection and inflammation response in the large intestine (Van Leeuwen & Bladh, pp. 1241).
Neutrophils (x 100/mm^3)	1.5-8.0	9.5	5.5	Increased neutrophiles due to acute infection in the large intestine (Van Leeuwen & Bladh, pp. 1243).
Lymphocytes (%)	10-20	19.9	2.0	N/A
Monocytes (%)	3.0-13.0	6.7	7.1	N/A
Eosinophils (%)	0.0-8.0	1.2	2.1	N/A
Bands (%)	0.0-10	N/A	N/A	N/A

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value (10/11)	Today's Value (10/12)	Reason For Abnormal
Na- (mmol/L)	135-145	134	138	N/A
K+ (mmol/L)	3.5-5.1	3.7	4.1	N/A
Cl- (mmol/L)	98-107	104	108	N/A
CO2 (mmol/L)	22-29	24	27	N/A
Glucose (mg/dL)	70-99	112	93	Increase glucose due to acute stress reaction from the infection and pain (Van Leeuwen & Bladh, pp. 632).
BUN (mg/dL)	8-21	12	6	N/A
Creatinine (mg/dL)	0.50-1.00	0.62	0.47	N/A
Albumin (g/dL)	3.5-5.2	3.8	N/A	N/A
Calcium (mg/dL)	8.4-10.5	8.9	8.2	N/A
Mag (mg/dL)	1.6-2.6	N/A	N/A	N/A

Phosphate (units/ L)	2.4-4.5	N/A	N/A	N/A
Bilirubin (mg/dL)	0.3-1.0	0.7	N/A	N/A
Alk Phos (units/L)	34-104	87	N/A	N/A

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission (10/11)	Today's Value	Reason for Abnormal
Color & Clarity	Straw/light yellow and clear	Yellow and cloudy	N/A	N/A
pH	5.0-9.0	6.2	N/A	N/A
Specific Gravity	1.001-1.029	1.028	N/A	N/A
Glucose	Negative	Negative	N/A	N/A
Protein	Negative/Trace	Trace	N/A	N/A
Ketones	Negative	Trace	N/A	Trace ketones in urine due to increased glucose levels (Van Leeuwen & Bladh, pp. 750).
WBC (per hpf)	0-5	2	N/A	N/A
RBC (per hpf)	0-5	4	N/A	N/A
Leukoesterase	Negative	2+	N/A	Increased leukoesterase found in urine due to infection in large intestine (Van Leeuwen & Bladh, pp. 1202).

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings

Urine Culture	Negative	Negative	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (APA):

Lakeview College of Nursing. (2021). *Tab: Diagnostics: Lab* [Class handout]. Charleston, IL: Lakeview Colling of Nursing.

Van Leeuwen, A. M., & Bladh, M. L. (2019). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implication* (8th ed.). F. A. Davis Company

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Computerized Tomography (CT) scan without contrast 10/02/2021: Patient came to hospital with pain in all four quadrants of the abdomen. This imaging procedure was needed to see if symptoms were being caused by a kidney stone. The procedure showed a thickened bowel wall and diagnosed patient with diverticulitis.

CT scan with contrast 10/11/2021: Patient was still experiencing abdomen pain after taking all her prescribed antibiotics. Provider decided to image again but with contrast to see why the antibiotic was not providing relief from symptoms. The imaging showed an abscess in the sigmoid colon that measured 2.9 x 2.7 cm.

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/ Generic	**Nexium/Esomeprazole magnesium**	**Zolmitriptan**	**Cyclobenzaprine hydrochloride**	**Hydrocodone acetaminophen**	**Ventolin HF/Albuterol sulfate**
Dose	20 mg	5 mg	10 mg	10 mg	90 mcg/inhale and 2 puffs
Frequency	Every morning	PRN	PRN	PRN	PRN
Route	PO	PO	PO	PO	Inhaled via mouth
Classification	Proton pump inhibitor (Jones, pp. 409)	Selective 5-hydroxytryptamin agonist (Jones, pp. 1145)	Tricyclic antidepressant-like agent	Opioid	Adrenergic
Mechanism of Action	Medication inhibits the hydrogen-potassium-adenosine triphosphatase enzyme system/proton pump in gastric parietal cells. It prevents the exchange of intracellular H+ and extracellular K+ to stop H+ from entering the stomach to make HCL (Jones, pp. 409).	"Constricts dilated and inflamed cranial blood vessels in the carotid circulation and inhibits production of proinflammatory neuropeptides by binding to receptors on intracranial blood vessels and sensory nerves in the trigeminal-vascular system to stimulate negative feedback, which halts the release of serotonin" (Jones, pp. 1145).	Medication works in the brain stem to reduce or stop tonic muscle hyperactivity and doesn't disrupt muscle function since it doesn't work in the neuromuscular junction (Jones, pp. 269).	"Binds to and activates opioid receptors at sites in the periaqueductal and periventricular gray matter, the ventromedial medulla, and the spinal cord to produce pain relief" (Jones, pp. 541).	"Albuterol attaches to beta 2 receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert adenosine triphosphate (ATP) to cyclic adenosine monophosphate (cAMP). This reaction decreases intracellular calcium levels. It also increases intracellular levels of cAMP. Together, these effects relax bronchial smooth-muscle cells and inhibit histamine release" (Jones, pp. 27).
Reason Client Taking	To treat symptoms of gastroesophageal reflux disease	To shorten duration of migraine	Muscle relaxer	Relieve pain or sleep aid	Treat allergy-related asthma

		headaches			
Contraindications (2)	1. Hypersensitivity to esomeprazole 2. Concurrent therapy with rilpivrine-containing products (Jones, pp. 409)	1. Cardiovascular disease 2. Hypersensitivity to zolmitriptan or its components (Jones, pp. 1143)	1. Acute recovery phase of myocardial infarction 2. Hyperthyroidism (Jones, pp. 269)	1. Acute or severe bronchial asthma 2. hypersensitivity to hydrocodone or any of its components (Jones, pp. 541)	1. Hypersensitivity to albuterol or its components 2. Hyperthyroidism (Jones, pp. 28)
Side Effects/ Adverse Reactions (2)	1. Depression 2. Alopecia (Jones, pp. 410)	1. Hyperesthesia 2. Vertigo (Jones, pp. 1143)	1. Arrhythmias 2. Neuroleptic malignant syndrome (Jones, pp. 269)	1. CNS depression 2. Hypotension (Jones, pp. 541)	1. Angina 2. Oropharyngeal edema (Jones, pp. 28)

Medications Reference (APA):

Jones & Bartlett Learning. (2020). *2021 nurse's drug handbook* (20th ed.). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Patient was alert and oriented to person, place, time, and situation. She was calm and compliant to assessment. Overall appearance was healthy, clean, and well cared for. She did not appear distressed other than from her pain.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score: 22** **Drains present: Y☐ N ☒** **Type: N/A**	Patient's skin was dry, warm, pink, and intact. She reported no rashes, lesions, or bruising. Skin turgor was elastic and < 3 seconds. There were no drains attached to the patient. Braden score was a 22 which indicates low risk of pressure ulcers.

HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Patient's head is normocephalic and neck is symmetrical with trachea at midline. Ears are symmetrical and have no visible drainage or cerumen. Patient did not appear to have any difficulty hearing and was responsive to sounds. Patient does not wear glasses and pupils were 3 mm and exhibited PERRLA. Eyes displayed good extraocular movements when assessed and were symmetrical with no drainage or inflammation. Conjunctiva was pink and moist. Nose was midline with no deviated septum and nares are symmetrical with no polyps. Patient has a permanent bridge of the top, front four teeth. Patient's tongue, buccal mucosa, and uvula was pink, moist, and had no lesions. Tonsils were 1+ bilaterally, pink, moist, and has no lesions.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☒ N ☐** **Location of Edema: Abdomen**	S1 and S2 heart sounds were audible with no murmurs or S3/S4 sounds. Cardiac rhythm was steady and regular. Peripheral pulses were symmetrical in beat and strength. Carotid and radial pulses were palpable at a +3. Capillary refill was < 2 secs and no jugular vein distention was observed. Patient did report edema in abdomen as "a little bloated".
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	There were no abnormal lung sounds during auscultation. Respiration rate was assessed while patient was in semi-Fowler's position and was measured to be 14 respirations per minute. Breathes were observed to be even and regular with no accessory muscles used. No chest deformities were seen, and patient denies any coughing, sputum production, or difficulty breathing.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention: None** **Incisions: None**	Patient reports a regular diet at home. She said that her and her husband usually cook at home and eat out maybe once a week. Patient says that they cook a range of food (ie Mexican or meat, corn, and beans). The patient's current hospital diet is clear liquids only. Patient's height is 170.2 cm and weight is 77.7 kg with a BMI of 26.8. Patient had normal bowel sounds in all four quadrants at a rate of 5-30 per minute with the occasional borborygmus heard. Patient did not report any vomiting or diarrhea. Patient did state

Scars: Lower abdomen from hysterectomy **Drains: None** **Wounds: None** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size: N/A** **Feeding tubes/PEG tube Y ☐ N ☒** **Type: N/A**	that bowel movements were still painful at 4/10 pain and her last BM was that morning (10/12). Abdomen was tender and soft when palpated but not distended with no drains, incisions, or wounds. There was a lateral scar in the lower abdomen about 10-12 cm long from hysterectomy. Patient does not have any ostomies, nasogastric or feeding tubes.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type: N/A** **Size: N/A**	Urine color was yellow and clear with no odor. Patient voided once and was continent during this shift. Patient did not report any pain or urgency during voiding. Patient did report increased frequency due to liquid diet and IV fluids. No dialysis or catheters.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☐ N☒** **Fall Score: 20** **Activity/Mobility Status:** **Independent (up ad lib) ☒** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	Neurovascular status is intact, and patient is in control of her senses. Patient does not report any paresthesia or paralysis and does not display pallor. Patient does report “a little trouble turning my head to the right because of my spine surgery” and “my right arm a little weaker than my left because of my spine surgery but I see a doctor regularly for it”. Patient’s right upper extremity strength is 4/5 and left upper extremity strength is a 5/5. Both lower extremities are a 5/5. Patient displayed full range of motion. Patient has no mobility issues and is allowed to ambulate as much as she can. Fall risk score is a 20 which is a low risk of falling. Patient does not need help with ADLs.
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☒ if no -** **Legs ☐ Arms ☒ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Patient only has slight weakness on upper right extremities. All other extremities are full strength. Eye exhibited PERRLA signs and articulates well. Patient is A&O x4, alert to her surroundings, and calm. Patient is focused on managing her pain so that the ulcer can heal. Patient can sense touch all over her extremities.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):**	Patient has kept in contact with her son and stepchildren via FaceTime and text message. Her

Developmental level: **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	husband visits her in the hospital and stays in her room with her. Patient states she is Christian but does not practice. Developmental level is appropriate for age and has a bachelor's degree.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1115	76 bpm LA	110/64 LA	14 resp/min	36.9 ˚C tympanic	96% RA

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1100	FLACC	Lower left quadrant of abdomen and left flank	6/10	Sharp, constant pain	Pain medication

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
125 mL/hr via IV 840 mL orally in the last 24 hrs (10/11)	600 mL during day shift (10/11) Voided once No BM

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

Nursing Diagnosis	Rational	Intervention (2 per dx)	Evaluation
• Include full nursing diagnosis with	• Explain why the nursing		• How did the patient/family respond

“related to” and “as evidenced by” components	diagnosis was chosen		to the nurse’s actions? • Client response, status of goals and outcomes, modifications to plan.
1. Acute abdominal pain related to inflammation of diverticula as evidence by pain score of 6/10 and abdominal cramping and pain.	This diagnosis was given because patient reports 6/10 pain in the abdominal area.	**1.** Teach patient how to effectively use PCA pump to manage pain. **2.** Administer prescribed pain medications.	Client reported a 4/10 on the FLACC pain scale about 30 minutes after nurse administered analgesics. Client also reported a better understanding of how the PCA pump worked.
2. Dysfunctional gastrointestinal motility related to abscess in sigmoid colon as evidence by abdominal cramping and pain especially during bowel movements.	This diagnosis was given because patient reports abdominal cramping and pain during bowel movements	**1.** Educate patient on importance of having a high fiber diet and adequate fluid intake. **2.** Encourage patient to participate in physical activity like walking as tolerated.	Client is willing to walk around the hospital floor a couple times a day. Client agreed to try to consume high fiber foods more often once back home, and husband is very supportive in eating more high fiber food with client.

Phelps, L. L. (2020). *Sparks and Taylor’s nursing diagnosis reference manual* (11th ed.). Wolters Kluwer.

Overall APA format (5 points):

Concept Map (20 Points):

Subjective Data

Pain is 6/10 on FLACC scale
Sharp, constant pain in upper and lower left quadrants on abdomen
Abdominal cramping and pain during bowel movements

Nursing Diagnosis/Outcomes

Acute abdominal pain related to inflammation of diverticula as evidence by pain score of 6/10 and abdominal cramping and pain
Patient reported 4/10 pain on FLACC scale 30 minutes after nurse administers analgesic
Dysfunctional gastrointestinal motility related to abscess in sigmoid colon as evidence by abdominal cramping and pain especially during bowel movements
Patient agrees to ambulate around the hospital floor up to 3 times a day
Patient agrees to introduce high fiber foods in diet once she has been discharged

Objective Data

Vitals: T 36.9 C, BP 110/64, P 76 bpm, R 14 resp/min, O2 96%
High levels of WBCs (13.2 K/L), neutrophils (9.5 x 100/mm^3), and blood glucose (112 mg/dL)
Abscess in the sigmoid colon measuring 2.9 x 2.7 cm

Patient Information

58-year-old female patient diagnosed with diverticulitis and an abscess in the sigmoid colon
Has a history of IBS
Admitted due to abdominal pain and cramping

Nursing Interventions

Teach patient how to effectively use PCA pump to manage pain.
Administer prescribed pain medications.
Educate patient on importance of having a high fiber diet and adequate fluid intake.
Encourage patient to participate in physical activity like walking as tolerated.